#### FISH & RICHARDSON P.C.

601 Thirteenth Street N.W. Washington, DC 20005

Telephone 202 783-5070

Facsimile 202 783-2331

Web Site www.fr.com

Frederick P. Fish 1855-1930

W.K. Richardson 1859-1951

March 29, 2002

William F. Caton, Acting Secretary Federal Communications Commission 445 Twelfth Street, S.W. Washington, D.C. 20554

Re: Ex Parte Presentation in ET Docket 98-42



Dear Mr. Caton:

BOSTON DALLAS

DELAWARE

NEW YORK

SAN DIEGO

SILICON VALLEY

TWIN CITIES

WASHINGTON, DC

Dear Mr. Caton:

On Wednesday, March 27, 2002, Mr. Kent Kipling, of Fusion Lighting, Inc. and I met with Paul Margie, Spectrum and International Legal Advisor to Commissioner Copps. The purpose of the meeting was to discuss Fusion's position with respect to out-of-band emissions proposals by Sirius Satellite Radio and XM Radio in the above-referenced proceeding. At the meeting, Mr. Kipling distributed the attached handout describing the history of Fusion Lighting, the various out-of-band emission's proposals, tests of DARS receivers performed by Fusion, and Fusion's request for a safe harbor.

Please contact me if you have any questions.

Very truly yours,

Robert J. Ungar

Counsel to Fusion Lighting, Inc.

Enclosure RJU/tmh

Cc: Carl. R. Frank Bruce D. Jacobs

# Fusion Lighting's Sulfur Lamp

- Highly efficient
- Highly acclaimed
  - 1995 R@D 100 award



- 1995 Popular Science Best of what's new
- 1998 Light Fair Innovation award
- 2001 Smithsonian Lighting exhibit
- Broadly supported
  - Private \$40M+, DOE \$6M+, NASA, EPA

March 2002

FCC Meeting

## History

- Fusion directed to the 2.45 GHz ISM band by the FCC in the 1970s
  - Basis of UV curing business
  - Basis of semiconductor equipment business
- Sulfur lamp FCC tested and approved 1996

Initial lamp sales 1996



### Proposed out-of-band limits

- Current limit 71dBμV/M @ 3M Avg.
- FCC proposal 54dBμV/M @ 3M Avg.
  - 85% reduction from current limit
- Fusion proposal 44dBμV/M @ 3M Avg.
  - 95% reduction from current limit
  - Safe Harbor

March 2002

- DARS demand 25dBμV/M @ 3M
  - 99.9% reduction from current limit
- Sirius petition 18.7dBμV/M @ 3M

7

FCC Meeting

71 dB<sub>µ</sub>V/m

54 dB<sub>µ</sub>V/m

44 dB µV/m

25 dB μV/m

18 dB<sub>µ</sub>V/m



2345

2320

#### Fusion Lighting Testing of DARS Receivers

- XM Satellite Radio
  - No interference from Fusion lamp at 3 meters
    - (Lamp emission 51 dBμV/M @3 meters)

- Sirius Satellite Radio
  - No interference from Fusion lamp at 5 meters
    - (Lamp emission 51 dBμV/M @3 meters)



#### Tentative Fusion Proposal

 In-band limits compatible with practical magnetron driven lamps

"Safe Harbor" guarantee for out-of-band emissions



#### **Tracy Haynes**

From: Robert J. Ungar

Sent: Monday, March 25, 2002 8:02 AM

To: Tracy Haynes Subject: FW: Safe Harbor

This is the 2d attachment for the ex parte letter on the meeting with Bryan Tramont.

----Original Message-----

From: Robert J. Ungar

Sent: Friday, March 22, 2002 4:11 PM

 To:
 'btramont@fcc.gov'

 Cc:
 Terry Mahn

 Subject:
 Safe Harbor

As promised I'm sending the cite for the FCC safe harbor precedent - 10 FCC Rcd 4695.

This was the approach used by the Commission to accommodate both LMS systems and Amateur and Part 15 devices in PR Docket 93-61. Addressing the secondary status of Amateur and Part 15 operations, the Commission explained, "...we are adopting rules that define and clarify what constitutes harmful interference from their secondary operations. Harmful interference is defined as '(a)ny emission, radiation or induction that endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with this chapter. To promote cooperative use of the 902-928 MHz band we are elaborating on this standard to define what is not harmful interference for both Amateur operations and unlicensed Part 15 devices to multilateration LMS systems. The 'negative definition' will promote effective use of the 902-928 MHz band by the various services by clearly establishing the parameters under which licensed Amateurs and unlicensed users of Part 15 devices may operate without risk of being considered sources of harmful interference to services with a higher allocation status. Part 15 and amateur operators who voluntarily operate within the following parameters will not be subject to harmful interference complaints from multilateration LMS systems at 902-928 MHz." at Para. 36

I hope this is useful.